

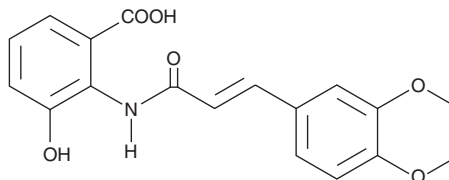
Product Information



3,4-DAA

Catalog No. 10007980

Formal Name: 2-[3-(3,4-dimethoxy-phenyl)-acryloylamino]-3-hydroxy-benzoic acid
MF: C₁₈H₁₇NO₆
FW: 343.3
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 3,4-DAA be stored as supplied at -20°C. It will be stable for at least two years.

3,4-DAA is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,4-DAA in an organic solvent purged with an inert gas. 3,4-DAA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3,4-DAA in these solvents is approximately 20 mg/ml in DMF and DMSO and approximately 1 mg/ml in ethanol.

3,4-DAA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3,4-DAA should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 3,4-DAA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Local catabolism of the amino acid tryptophan by indoleamine 2,3-dioxygenase (IDO) is considered an important mechanism of regulating T-cell immunity. Inhibition of the production of T helper-1 (T_H1) cytokines offers a new strategy for treating T_H1 mediated autoimmune diseases such as multiple sclerosis. 3,4-DAA is an orally active synthetic derivative of the tryptophan metabolite anthranilic acid. It suppresses antigen-specific proliferation of MBP Ac1-11 TCR CD4⁺ T-cells. At a concentration of 200 μM, 3,4-DAA reduces IFN-γ, IL-2, IL-12/23 p40, and TNFα in splenocytes from antigen-induced transgenic mice. However, at a concentration of 30 μM, IL-4, and IL-10 levels were increased. Expression of inducible nitric oxide synthase and nitric oxide release from EOC20 cells induced by IFN-γ and LPS are also suppressed by 3,4-DAA at concentration of 30-200 μM. Mice with experimental autoimmune encephalomyelitis treated orally (300 mg/kg per day) with 3,4-DAA exhibited fewer and milder relapses and less severe disease compared to control animals.¹

Reference

1. Platten, M., Ho, P.P., Youssef, S., *et al.* Treatment of autoimmune neuroinflammation with a synthetic tryptophan metabolite. *Science* **310**, 850-855 (2005).

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WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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